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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,671

01/24/2004

I-Ru Liu

04114-UPL

7476

33804

7590

04/16/2007

LIN & ASSOCIATES INTELLECTUAL PROPERTY

P.O. BOX 2339

SARATOGA, CA 95070-0339

EXAMINER

HA, DAC V

ART UNIT

PAPER NUMBER

2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/763,671

Applicant(s)

LIU, I-RU

Examiner

Dac V. Ha

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 14-17 are objected to because of the following informalities:

The recitation "TDOA", "AOA", "BDW" and "SDF" in claim 14 should be spelled out (i.e. as those in independent claim 1) when first recited.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Molnar et al. (US 2002/0044614) (hereafter Molnar).

Regarding claim 1, Molnar suggests the teaching of the claimed subject matter "using time of arrival of a wireless burst as a synchronization basis to compound synchronously a frequency word, a time different of arrival (TDOA) word, an amplitude word, and an angle of arrival (AOA) word of said burst into a burst descriptor word (BDW) having a signal parameter set, said signal parameter set comprising said frequency word, said TDOA word, said amplitude word, and said AOA word; comparing said BDW with a previous said BDW and a burst library to screen out non-interference signals and obtain a matched result, said matched result comprising a plurality of said BDWs of interference sources; using a statistical analysis process to categorize said

BDWs of said matched result into a source discriminator file (SDF); and comparing said SDF with a previous said SDF and a SDF library to generate an interference source identification result" as follows. Molnar discloses a system for identifying an interference source using one or more of a various parameters associated with the interference signal (para. 0036 – 0040; Fig. 3, element 42). Further, such information is utilized in classification to determine a plurality of interference scenario; to identify the interference source and ultimately to demodulate the desired signal while canceling the identified interference source(s) (Fig. 4; Fig. 3, elements 44, 50, 46, 48; para. 0041-0057). The identification is then updated in an update system for to keep the system current and to assist future operation (Fig. 3, element 46, 60; para. 0065-0073).

Even though Molnar does not discloses the claimed subject matter in the exact term, Molnar discloses a general concept that could have achieved the same purpose at that of the claimed invention through simple modification. That is, Molnar discloses that one or more of a various parameter associated with the interference source could be used for identifying the interference source (i.e. signal power level, signal timing; frequency, arrival angle, etc.) (para. 0036-0039). Therefore, based on the concept discloses by Molnar, the use of particular "parameter" for "compounding" the "burst descriptor word" would have been easily recognized by one skilled in the art depending on application specific and available resources.

Regarding claim 14, see claim 1 above.

Regarding claim 18, see claim 1 above and Fig. 6.

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Regarding claims 2-13, 15-17, these claimed subject matter would have been obvious to one skilled in the art as application specific/preference for similar analogy as that indicated above.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dickey (US 7,013,113) discloses Method And Apparatus For Co-Channel Interference Measurements And Interference Component Separation Based On Statistical Signal Processing In Drive-Test Area.

Shah et al. (US 6,442,384) discloses System And Method For Identification Of Uplink/Downlink Interference Sources.

Bergstrom et al. (US 6,118,805) discloses Method And Apparatus For Performing Frequency Hopping Adaptation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a long horizontal flourish extending to the right.

Dac V. Ha
Primary Examiner
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